

**NUCLEIC ACID SEQUENCES AND METHODS OF USE FOR THE
PRODUCTION OF PLANTS WITH MODIFIED POLYUNSATURATED FATTY
ACIDS**

5 By this invention, novel nucleic acid sequences are provided, wherein said nucleic
acid sequence is a genomic sequence of a plant desaturase encoding sequence. Also
provided in the present invention are the promoter and intron sequences of the desaturase
genomic sequences. Furthermore, recombinant DNA constructs employing the
polynucleotide sequences are provided. The instant invention also provides methods for
10 the modification of fatty acid compositions in host plant cells.